Samsung SUR40 with Microsoft® PixelSense™

Bring people together to connect, learn, and decide using touch and everyday object.

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Engage audiences with immersive touch technology.

Change the way business attracts and serves customers

In hospitality, retail, healthcare, professional services and the public sector, businesses are realizing the potential of digital displays to transform user experience. Interactive displays can engage customers and also help companies encourage teamwork, enhance learning and boost employee productivity.

Samsung SUR40 with Microsoft® PixelSense™ provides an innovative way to bring people together to connect, learn and buy using touch and everyday objects. Its multitouch, multiuser capabilities make it a valuable tool for commercial and public sector organizations. Used as a table with optional legs, on a wall or within an enclosure, SUR40 serves as a centerpiece for sharing information. With SUR40, companies can:

- **Make content more engaging and learning more interactive.** Firms can provide exciting ways for users to play with branded applications, and use rich visualizations to stimulate learning and teamwork.
- **Plan and simulate.** Companies can create near real-time models, visualizations, simulations and calculations.
- **Communicate and connect.** Users can find and send information more efficiently on intriguing displays that can feature maps, directories and more.
- **Transform the shopping experience.** Shoppers can connect to personalized recommendations, product comparisons and services.

Figure 1. With multitouch, multiuser capabilities, SUR40 can change the way people collaborate.

Make new connections

The use of digital signage technology has made clear the importance of intimate contact with customers closer to the point of sale. Now interactivity has become one of the most important functions of digital signage. Interactivity combines touch and gesture technology with vivid, transparent images and large-scale displays. Technology once seen only in futuristic movies is becoming part of everyday life.

SUR40 uses Microsoft® PixelSense™ technology, a vision-based system that responds to touch and objects, to create a new information experience. In January 2012, SUR40 was recognized for outstanding design and engineering as a "Best of Innovations" award winner at the Consumer Electronics Show.[1]

Connect using advanced technologies in a thin display

SUR40 is a 40-inch interactive touch PC with a narrow bezel that can be mounted or enclosed virtually anywhere a business wants to connect it. With Microsoft® PixelSense™ technology, SUR40 can be customized to recognize unique IR tags and even detect physical objects placed on its surface.

Responds to touch and other gestures

SUR40 responds to many user gestures and can interact with real-life objects. For example, users can brush or sweep their hands across the surface to move content objects or interact with displays. Applications like Water Attract can conform and react to objects by bouncing off or moving around them to create ripples and other responses.

Figure 2. SUR40 creates an immersive environment that responds to and interacts with users.

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In addition to object recognition, SUR40 can see and react to more than 50 points of contact simultaneously from multiple users. Groups of users can play games, manipulate content and images, and create special effects. SUR40 can be used as a table, or mounted vertically or horizontally to fit most environments.

Enjoy exceptional connectivity and digital device interaction

SUR40 features a wide range of connectivity options, including High Definition Multimedia Interface (HDMI), 802.11n, Ethernet and Bluetooth. Four Universal Serial Bus (USB) ports enable connections to peripherals, including bar code scanners, video cameras, laptops, printers and more.

Figure 3. Businesses can connect SUR40 to a wide range of peripheral devices.

Businesses can also install applications that enable information sharing between Internet- and Bluetooth-enabled devices. Content on the SUR40 can then be dragged and dropped to mobile devices, tablets and laptops placed on its surface, and vice versa.

Figure 4. SUR40 supports development of drag-and-drop connectivity with devices.

Provide a stunning, immersive experience for customers

With rich color saturation from a full high definition (FHD) display, SUR40 helps captivate and delight audiences. Accelerated graphics, a crystal-clear LCD display and four-speaker surround sound help grab user attention. Durable and designed for public use, SUR40 benefits from Samsung expertise in visual display design.

Recognize and respond to real-world objects with an exclusive vision system

PixelSense™ provides the technology behind the physical object recognition capabilities of Samsung SUR40. A Samsung LCD panel with integrated sensors and a background of image retention (IR) LED screens creates a feature-rich vision system that responds to surface objects. Installation of Corning® Gorilla® Glass helps protect SUR40 from damage, including water immersion.[2]

SUR40 recognizes tagged objects such as business reward cards, coupons, flyers and much more. Businesses can write applications that react to tagged objects in many ways. For example, hotel guests can check out or see maps and other information with a swipe of a key card. Shoppers can place items on the interactive surface to retrieve recommendations, see related items or check stock availability.
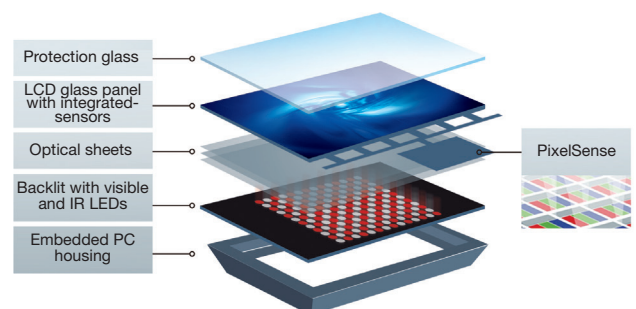
Protection glass
LCD glass panel with integrated sensors
Optical sheets
Backlit with visible and IR LEDs
Embedded PC housing
PixelSense

Figure 5. PixelSense technology illuminates objects using a combination of integrated sensors and IR LEDs.

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Engage customers at the point of sale to encourage additional purchases.

Build business applications with streamlined development tools

Microsoft Surface® 2.0 SDK is an essential component of SUR40. The software development kit (SDK) enables software developers to take advantage of PixelSense technology to create applications that run on SUR40 and other Windows® 7 devices. With support for Microsoft Windows 7 Professional for Embedded Systems (64-bit), developers can create and test applications on a Windows 7 touch computer.

The Microsoft Surface 2.0 SDK builds upon the following application programming interfaces (APIs) and developer tools:

- Microsoft .NET Framework 4.0
- Windows Presentation Foundation
- XNA Runtime 4.0
- Windows PowerShell™ scripts
- Distributed Management Task Force (DMTF) Desktop and Mobile Architecture for System Hardware (DASH)

The Microsoft Surface 2.0 SDK includes enhanced administrator tools for quicker configuration and smoother integration with existing infrastructures. Administrators can rapidly make changes to background images, enable and deploy applications, and modify settings with additional coding. Businesses can create and display applications with Microsoft Windows PowerShell scripts. Applications can be delivered to tables, counters, kiosks and walls.

Figure 6. Microsoft Surface 2.0 SDK helps companies deploy custom applications in many different environments.

Deploy to the enterprise level with greater ease

Enterprise administrators can manage applications and content on SUR40 remotely for greater business control. When installed at customer or employee locations, basic settings can be controlled by venue staff. Volume, brightness and input source can be safely adjusted without interfering with delivered content.

Transform customer experiences and boost sales

Businesses of many types can use SUR40 to help boost customer satisfaction and retention. For example, hotel guests can view available room types, review amenities and explore properties. Retailers can provide a rich, assisted sales experience while giving customers more control over their purchases.

Gaming and other immersive technologies can help make customers feel welcome while encouraging additional sales and other offers. Fun, engaging group experiences can help companies deliver brand messaging at the point of sale or use, encouraging retention.

Businesses see real impact

A popular casino and hotel chain created a suite of applications for connecting directly to customers at their properties. Tools include social networking among patrons, group games and contests, and virtual tours of related properties. Applications designed for object recognition help make stays more enjoyable by recognizing brand objects and offering customized discounts.

A premium health and beauty brand created a customized shopping application that helped lift revenues. Customers can place tagged objects onto the surface to access detailed product information, reviews and how-to videos. The application includes a virtual shopping cart for faster ordering.

Financial services companies use SUR40 in retail banking locations for a feature-rich experience. Several applications help customers explore investment and account options and meet staff. Interactive puzzles and games keep children busy, while prize applications encourage new business.

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Move business applications into the real world

Windows 7 integration means employees can use SUR40 for unified communications and collaboration. Productivity, business intelligence and many other critical applications can be accessed and used more efficiently in group settings.

With SUR40, interactivity becomes the new standard for information technology services. Touch and gesture technology, and object recognition help make IT less intrusive in workspaces. Employees can concentrate on the work they must complete instead of wrestling with hardware and software.

PixelSense helps bring modeling, planning and analytic application objects to life. Instead of manipulating spreadsheets or databases, users can view simulations and construct scenarios by moving objects. SUR40 is designed to make the most of consultative environments such as financial services and healthcare.

Figure 7. Businesses can enable collaboration by bringing critical applications to life.

Features and benefits

Features	Benefits
Slim design	The 40-inch large format display is a mere 4 inches thick for convenient placement almost anywhere.
Microsoft® PixelSense™	Rich visualization, touch input and object recognition help provide immersive experiences.
Microsoft Surface 2.0 SDK and Windows 7 Professional for Embedded Systems	Powerful computing and application development capabilities help simplify integration and management.

Bring critical intelligence, communications and other applications to life for higher productivity.

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Transform environments and boost productivity and return.

Deliver engaging user experiences

Samsung SUR40 with Microsoft® PixelSense™ can transform user interactions with information while driving business goals forward. Businesses can:

- Provide imaginative, immersive environments for business and customer content
- Enjoy installation flexibility that makes customer engagement more versatile and less expensive
- Enable higher productivity and increased returns with holistic, innovative user experiences

Take the next step

For an overview of the many developer features, applications and application providers available for Samsung SUR40 with Microsoft® PixelSense™, visit www.pixelsense.com. To learn more about developing applications with Microsoft® PixelSense™ technology, visit www.msdn.com/windows/pixelsense.
Please visit www.samsunglfd.com/solution/sur40.do to find the samsung representative for your region.

Figure 8. Business capabilities can be brought to life for customers in virtually any environment.

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Specifications

Item	Detail
Operating system	Windows 7 Professional for Embedded Systems (64-bit)
CPU	AMD Athlon X2 245e, 2.9 GHz, Dual Core
Panel size	40 in. diagonal
Protection glass	Corning® Gorilla® Glass
Display resolution	1,920 x 1,080 full HD, 1080p
Aspect ratio	16:9
Contrast ratio	2000:1
RAM	4 GB, Double Data Rate (DDR) 3
GPU	AMD Radeon HD 6750, 1 GB Graphics Double Data Rate (GDDR) S
Hard drive	320 GB
Brightness	300 candelas per square meter (cd/m^2)
System management tools	DMTF DASH support
Communications	1 GB Ethernet, 802.11n, Bluetooth
Operating temperature	Max. ambient 86ºF (30ºC)
I/O ports	4 USB, 1 SD card reader
Audio out	HDMI, stereo RCA, 3.5 mm audio out x 2
HDMI li/HDMI out	Yes
Weight (with optional legs, sold separately)	50.4 kg
Weight (stand-alone)	36.8 kg
Pre-installed software	Bing™ for Microsoft Surface

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Legal and additional information

About Samsung Electronics Co., Ltd.

Samsung Electronics Co., Ltd. is a global leader in semiconductor, telecommunication, digital media and digital convergence technologies with 2011 consolidated sales of US$143.1 billion. Employing approximately 222,000 people in 205 offices across 71 countries, the company operates two separate organizations to coordinate its nine independent business units: Digital Media & Communications, comprising Visual Display, Mobile Communications, Telecommunication Systems, Digital Appliances, IT Solutions, and Digital Imaging; and Device Solutions, consisting of Memory, System LSI and LCD. Recognized for its industry-leading performance across a range of economic, environmental and social criteria, Samsung Electronics was named the world's most sustainable technology company in the 2011 Dow Jones Sustainability Index. For more information, please visit www.samsung.com.

For more information

For more information about Samsung SUR40 with Microsoft PixelSense , visit www.samsunglfd.com.

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1. James Maki, "Samsung SUR40 for Microsoft Surface Receives Best of Innovations Aware at CES," MSDN Blogs, 13 January 2012.
2. Gorilla Glass can protect Samsung SUR40 with Microsoft PixelSense from water ingress up to one hour.

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2012-11